

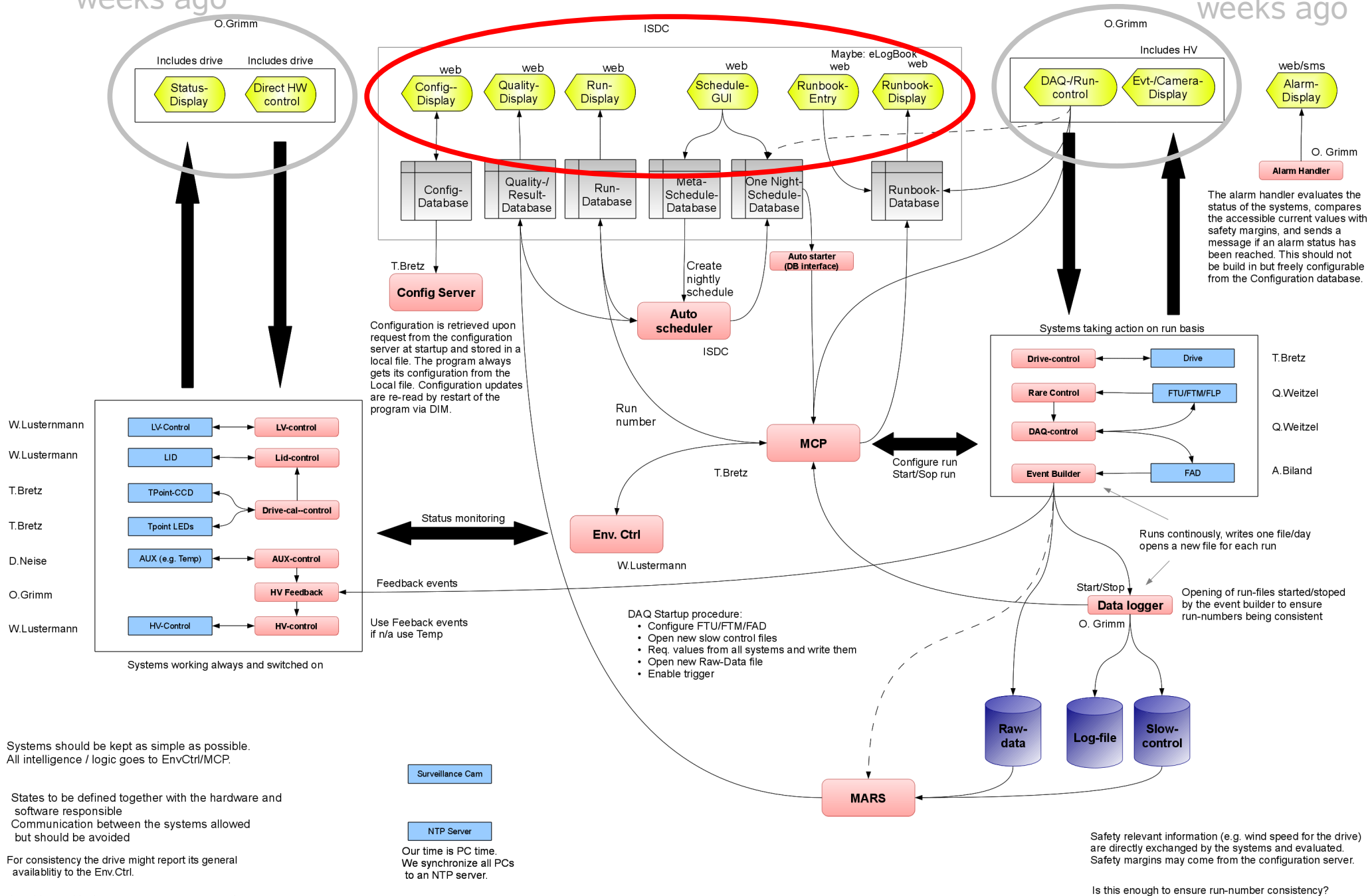
GUI requirements

- overview
- types
 - displaying DB content
 - editing DB content
 - plotting DB content / displaying result plots
- requirements
- some examples
- open questions

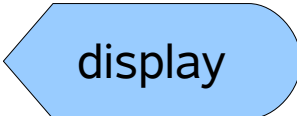


discussed few
weeks ago

discuss today

discussed few
weeks ago



What kind of GUIs do we have?

- analysis / data flow: 3 entities for data and MC
 - runs
 - sequences
 - data sets
 - in addition: general information (scheduling, rbk, ...)
- technical point of view:
 - displaying database content  display
 - insert new content / update existing content  insert / update
 - plot database content  plot
 - display plots from the analysis

scheduling:

insert
schedule

display
schedule

display
sources

build dataset
run analysi

processing
status:

display
status

update
status

Simulated Data

Real Data

corsika / MMCS

Cherenkov
Photons

ceres

ceres

P-run

C-run

D-run

group runs to
sequence

callisto

calibrated data

star

image parameter
group sequences to
data set

ganymed

events after cuts

sponde

spectrum

data quality

telescope/daq

reports

merpp

display
quality

plot
quality

display
configuration

display
run info

display
sequ. info

display
dataset info

elogbook:

display
runbook

update
runbook

results:

* calibration

* star

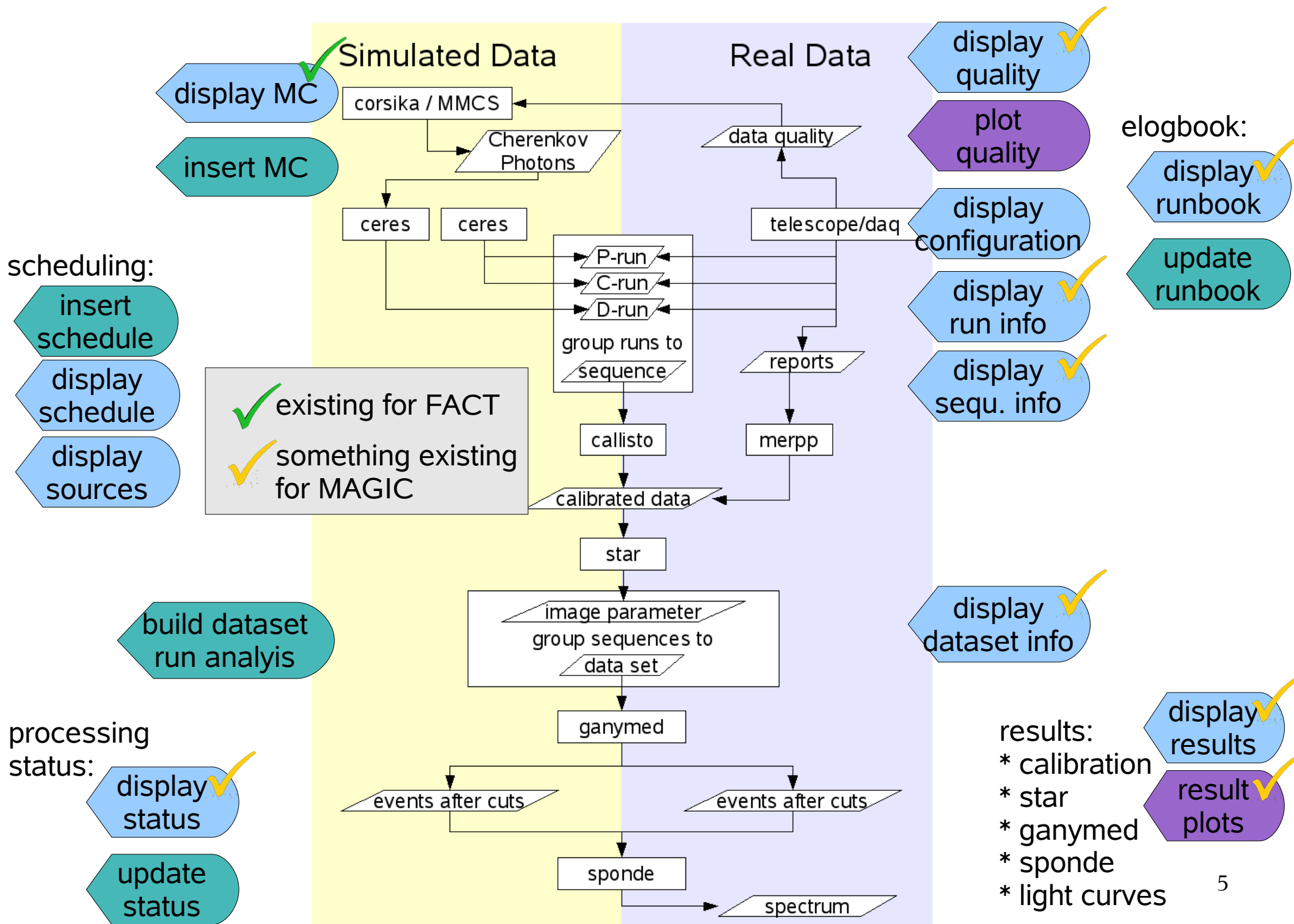
* ganymed

* sponde

* light curves

display
results





result
plots



Requirements Displaying GUIs

- sort by columns ✓
- group-by values ✓
- group-by status ✓
- select rows for a certain value ✓
- select range for certain value (e.g. runnumber) ✓
- print values in colour according to quality limits ✓
(default provided, but also settable by the user)
- possibility to select runs (sequences) to get ✓
sequences (datasets)

Requirements Displaying GUIs 2

- links to result plot  for successfully processed data
- print-view 
- get-txt: download query as txt-file 
- get-tex: download query as tex-file
- show/hide menu and menu-parts 
- tooltips/help for explanation of parameters
- user can store the selection of parameters to be displayed by default

Requirements Displaying GUIs 3

- general quality flag 'summarizing' all quality indications
- remove lines from view ✓

Displaying GUI

Run Range Status Calib Star ...

☐ value1 from to

☐ value2 ☐

list of rows

to expand menu

Existing Displaying GUI

FACT Database - SeaMonkey <2>

File Edit View Go Bookmarks Tools Window Help

Back Forward Reload Stop http://www.astro.uni-wuerzburg.de/~dorner/factdb/mcinfo.php Search Print

fact isdc cta magic 1553 sw lang lex astro ecri useful

FACT Database

[FACT](#) [Home](#) [Help](#) [Mars](#)

☐ Menu ☐ MCRunInfo ☐ StatusInfo ☐ Ranges

<input checked="" type="checkbox"/> Num of events	<input checked="" type="checkbox"/> Sequ#		
<input checked="" type="checkbox"/> Impact	<input checked="" type="checkbox"/> Viewcone	<input checked="" type="checkbox"/> Starting alt.	<input checked="" type="checkbox"/> Mirror diam.
<input type="checkbox"/> Zenith dist. min	<input type="checkbox"/> Zenith dist. max	<input type="checkbox"/> Azimuth min	<input type="checkbox"/> Azimuth max
<input checked="" type="checkbox"/> Emin	<input checked="" type="checkbox"/> Emax	<input checked="" type="checkbox"/> Slope	
<input checked="" type="checkbox"/> Particle type	<input checked="" type="checkbox"/> Run type	<input type="checkbox"/> Atm. model	<input checked="" type="checkbox"/> Ceres setup
--- ALL ---	--- ALL ---	--- ALL ---	--- ALL ---

Runs from 4 to 1292

Results: 50 Query Table Reset

No query submitted yet.

Requirements Editing GUIs

- GUIs to edit the database:
 - insert and update meta schedule
=> see other presentation and wiki
 - MC insert
 - update status
 - build data sets / start analysis

MC insert

- details see wikipedia on MC concept
- question: do we also need to delete information from the database? (e.g. test MC)

Update Status

- reset status for all processing steps
 - for ranges or lists of runs / sequences / data sets
 - for certain type of data (source, trigger settings, ...)
 - make sure that also following steps are reset according to their dependencies
- change priority of rows (to allow for changes in the processing order)
 - for single rows
 - for ranges or lists of runs / sequences / data sets

Data Sets / Analysis

- build data sets ✓
- launch certain analysis (e.g. special cuts, special configuration, ...) for data sets (existing and own)
- check processing status of this analysis ✓
- get informed when output is available

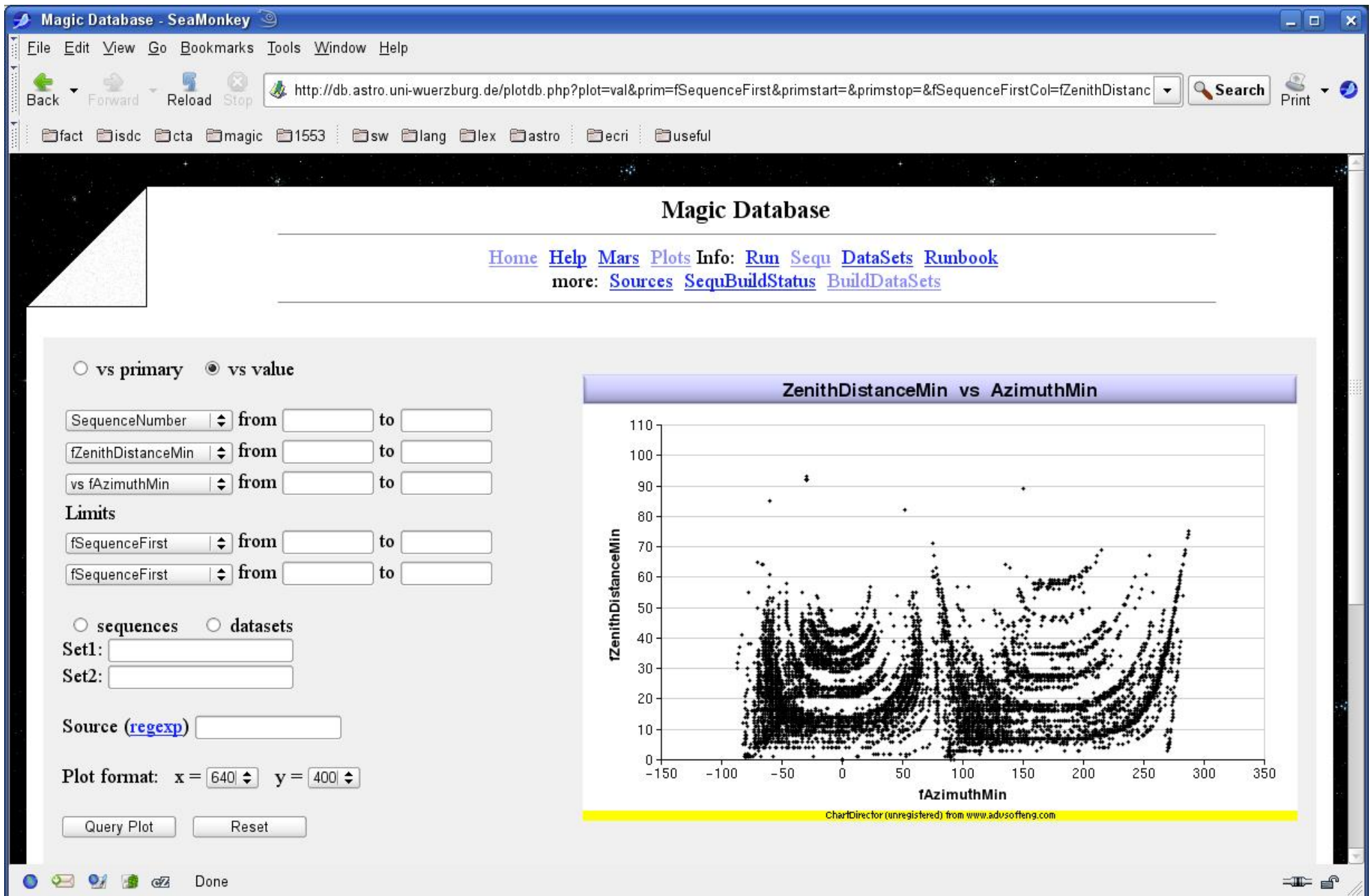
Requirements Plotting GUIs

- Plotting GUIs:
 - plot quality or result values from the database
 - display schedule graphically
 - provide result plot (MARS StatusDisplay) in the web

Plotting from DB

- plot vs MJD
 - plot vs run / sequence / dataset number ✓
 - plot vs other value ✓
 - overlay in colour values for
 - certain set(s) of data ✓ (chosen from db or provided by user)
 - certain source
 - certain configuration / telescope setup
 - user can give limits for the displayed and additional values ✓
 - zooming
- for MAGIC: ChartDirector is used,¹⁶ but doesn't provide all needed features

Existing Plotting GUI

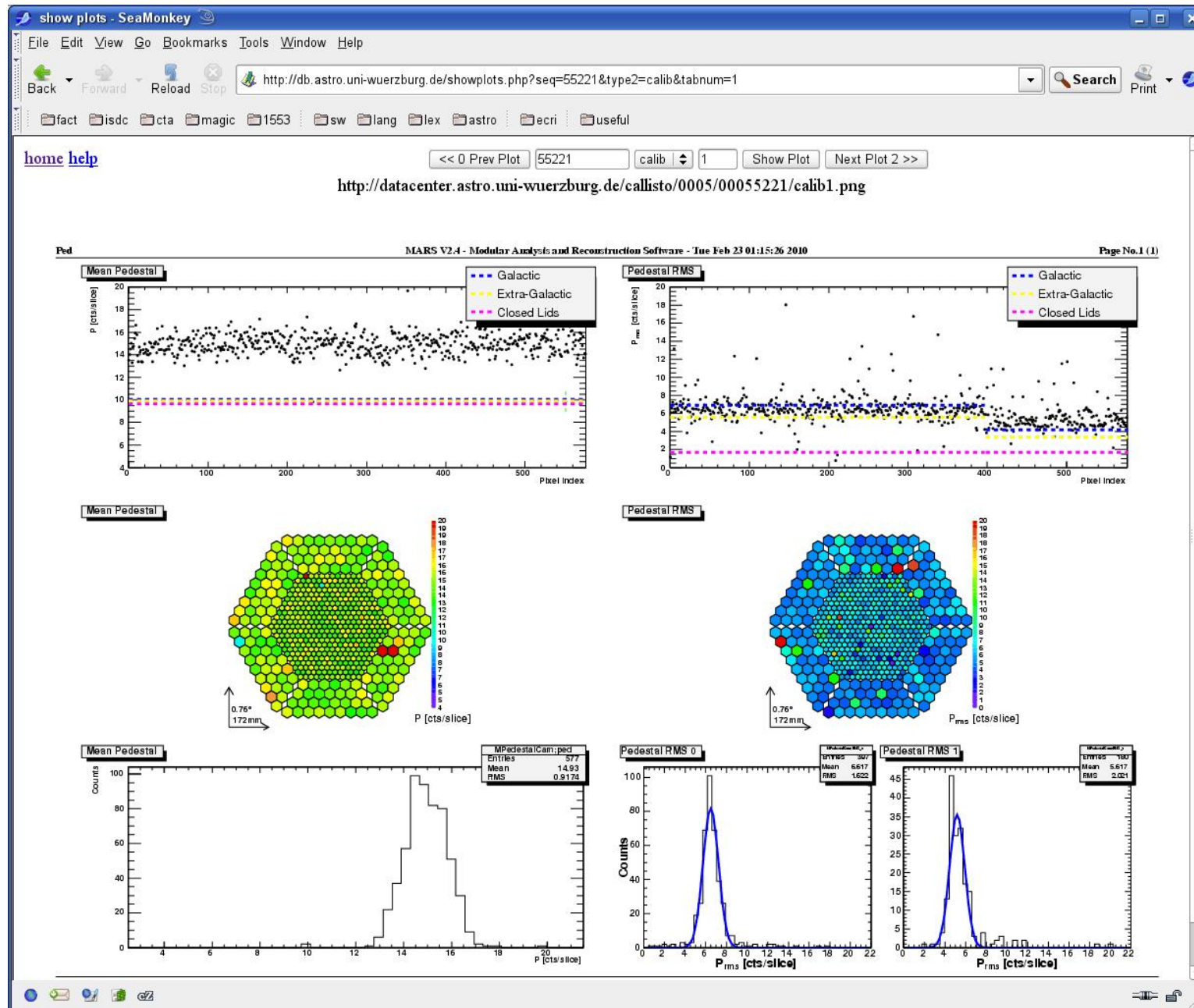


Result Plots

- display plots from MARS StatusDisplay ✓
- go through all quality plots of one run / sequence / data set ✓
- go through a certain quality plot for a
 - time range
 - sequence range ✓
 - source ✓
 - telescope setup
- zooming in plots

for MAGIC: png files are created ¹⁸
and made accessible via php-scripts

Existing Plotting GUI



Existing Plotting GUI

SeaMonkey browser window showing the plotting GUI for the sequence 00055221.txt.

Address bar: <http://db.astro.uni-wuerzburg.de/tabs.php?t=star&n=55221>

Navigation buttons: Back, Forward, Reload, Stop

Search bar: Search

Print button: Print

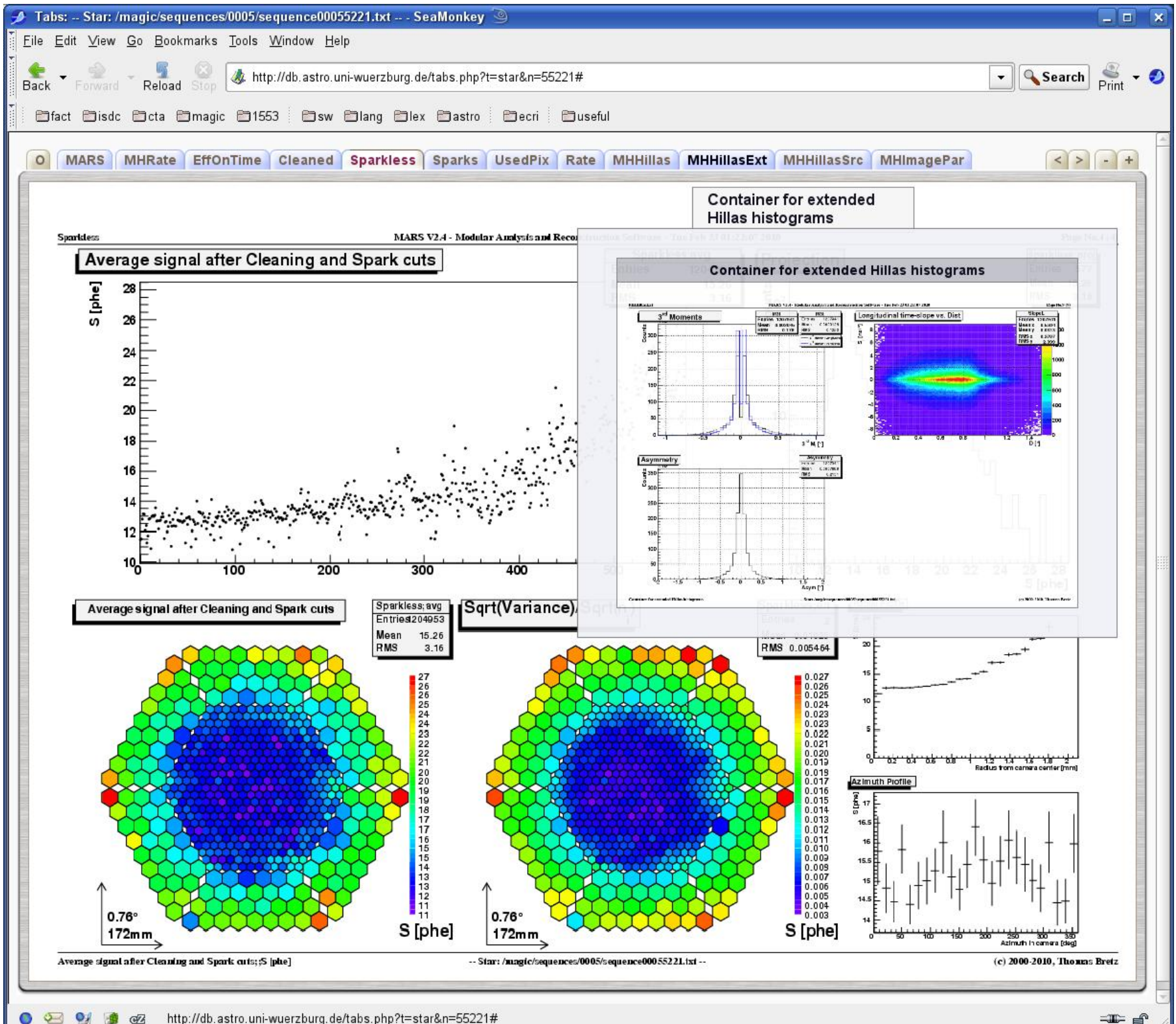
File menu: File, Edit, View, Go, Bookmarks, Tools, Window, Help

Browser tabs: MARS, MHRate, EffOnTime, Cleaned, Sparkless, Sparks, UsedPix, Rate, MHHillas, MHHillasExt, MHHillasSrc, MHImagePar

Content area: -- Star: /magic/sequences/0005/sequence00055221.txt --

1	MHRate	Graphs for rate data
2	EffOnTime	Histogram to determin effective On-Time vs Time and Zenith Angle
3	Cleaned	Average signal after Cleaning;;S [phe]
4	Sparkless	Average signal after Cleaning and Spark cuts;;S [phe]
5	Sparks	Average signal after Cleaning for Spark cuts;;S [phe]
6	UsedPix	Fraction of Events in which Pixels are used;;Fraction
7	Rate	Event rate after cleaning [Hz]
8	MHHillas	Source independent image parameters
9	MHHillasExt	Container for extended Hillas histograms
10	MHHillasSrc	Container for Hillas histograms
11	MHImagePar	Histograms of image parameters
12	MHNewImagePar	Histograms of new image parameters
13	MHMuonPar	Histograms of muon parameters
14	MHWeather	Graphs for weather data
15	MHPointing	Graphs for rate data
16	MeanRms	Average pedestal rms of all pixels vs time;;<\sigma_{p}> [phe]
17	Currents	Average DC currents of all pixels vs time;;<I> [nA]
18	IPR	Mean of all IPR;;<IPR> [Hz]
19	DT	Average Discriminator Thresholds;;DT [au]
	Download	star.rc
	Download	star00055221.html
	Download	star00055221.log
	Download	star00055221.pdf
	Download	star00055221.ps
	Download	star00055221.root

Done



Other Requirements

- user management
(same users as for svn, trac, etc.)
- user rights: different users are allowed to
 - only view information (external user)
 - insert MC (MC user, analyzer)
 - edit schedule (TAC, operator)
 - edit processing status (datacenter user)
 - build data set / start dedicated analysis (analyzer)